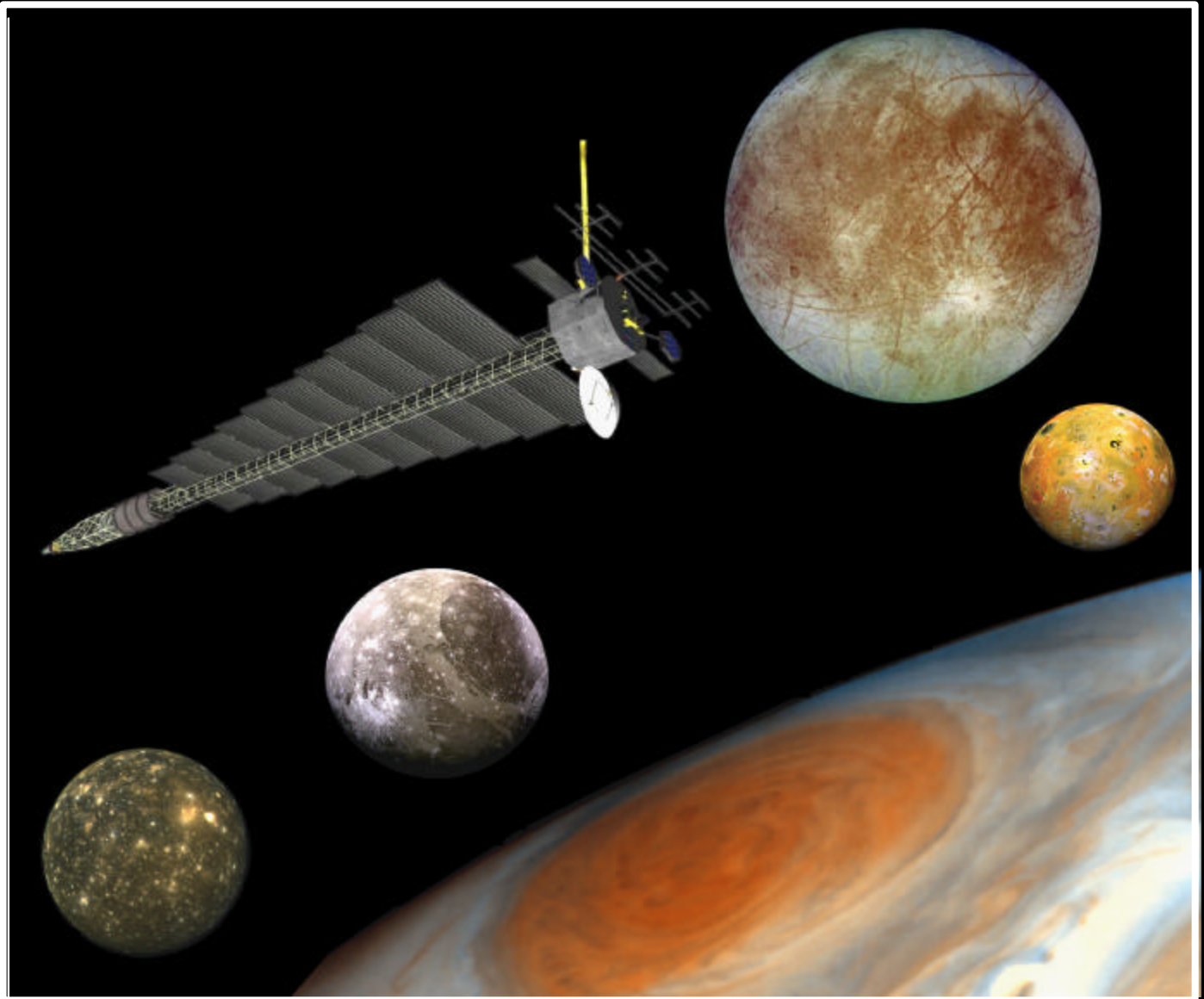


**National Aeronautics and Space Administration  
NASA/MSFC/JPL/UAH 14th Annual  
Advanced Space Propulsion Workshop (ASPW 2003)  
April 15-17, 2003  
- and -  
Workshop on Emerging Propulsion Technologies  
for Robotic Exploration of the Solar System (EPTW)  
April 18, 2003**



**University of Alabama in Huntsville  
Huntsville, Alabama**

# Table of Contents

ASPW 2003  
University of Alabama in Huntsville (UAH)  
April 15-17, 2003

ABSTRACTS 

PRESENTATION CHART LIST 

CHARTS



**Plenary Session:** Programmatic overviews



**Advanced Chemical and Earth-to-Orbit (ETO) Propulsion:** High-energy density material (HEDM) propellants, hybrids, detonation, etc.; Launch assist catapults (e.g., MagLev), MHD-augmented chemical, virtual inlets, Laser/microwave beamed energy, etc.



**Propulsion Component Improvements:** Advanced materials, light-weight magnets, advanced radiators, etc.



**Beamed Energy Propulsion:** Solar/laser/microwave thermal propulsion, high-power beamed-energy systems, etc.



**Propellantless Propulsion:** Solar/laser/microwave/plasma sails, Aero/gravity assist, Tethers, etc.



**Nuclear Propulsion:** Fission thermal/electric/hybrid, nuclear isomers, fusion, antimatter



**Advanced Electric Propulsion:** Power Systems, Thrusters (Ion, Hall, MPD, etc.)

## **AUXILIARY DATA**

### **Attendee List**

### **Supplementary Powerpoint Presentations**

**Antimatter Driven Sail for Deep Space Missions, Steven D. Howe and Gerald P. Jackson (Hbar Technologies, LLC)**

**Navigating Through Space: Continuous Thrust Trajectories in 3-D, Ulyana Horodyskyj (Padua Franciscan High School)**

**The Space Elevator, Bradley C. Edwards (Institute for Scientific Research)**